

### REMARKS

Claims 1 to 97 are the pending claims being examined in the application, of which Claims 1, 34, 39, 59 and 93 are independent. Claims 1, 14, 39, 59 and 72 are being amended. Reconsideration and further examination are respectfully requested.

Claims 1, 39 and 59 are amended to recite that scoring a user log is responsive to a frequency of occurrence of at least one query item identifier in the user log, a frequency of occurrence of the at least one query item identifier in all of the user logs and a query weight for the at least one query item identifier in the query. Claims 14 and 72, which recite that a subset of scored user logs is defined responsive to the user log scores, are amended to recite that the at least one result item is determined from the subset of scored user logs. The amendments made to the claims are fully supported by the application as originally filed.

Reference is respectfully made to the originally-filed application at paragraph [0226], which describes an embodiment in which a score for a user play log,  $i$ , can be determined as follows:

$$[0242] \quad score_i = \sum_j w_{ij} q_j$$

In paragraph [0242], a score of a user's play log,  $i$ , can be determined as a sum of a product determined for each track,  $j$ , of a weighting,  $w_{ij}$ , and a query weight,  $q_j$ . In accordance with one or more embodiments,  $w_{ij}$ , comprises a product of weights, as shown in paragraph [0239] of the originally-filed application reproduced below:

$$[0239] \quad w_{ij} = \alpha \beta \chi$$

With reference to originally-filed application at paragraphs [225], [0226] and [230]-[236],  $\alpha$  represents a frequency, or number, of occurrences of a track,  $j$ , in the user's play log,  $\beta$  represents a frequency, or number, of occurrences, of the track,  $j$ , in all users' play logs, and the third weighting factor,  $\chi$ , is a normalizing factor that can take into account a play log's length, which normalizing factor can be set to a constant of 1. As is further described at paragraph [0241] of the originally-filed application,  $q_j$ , is a query weight that represents the frequency, or number, of occurrences of track,  $j$ , in a query,  $q$ . Based on at least these portions of the originally-filed application, in accordance with one or more embodiments, a score for a user's

play log,  $i$ , is responsive to a frequency of occurrence,  $\alpha$ , of at least one query item,  $j$ , in the user's play log, a frequency of occurrence,  $\beta$ , of the at least one query item in all of the user logs, and a query weight,  $q_j$ , for the at least one query item in the query. By way of a further non-limiting example, with reference to paragraph [251] of the originally-filed application, play logs can be selected based on the scores generated for each play log, and items can be selected from the selected play logs.

By the Office Action, Claims 1, 4 to 14, 17 to 27, 32, 33, 39, 42 to 45, 48 to 59, 62 to 72, 75 to 85, 91 and 92 are rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,438,579 (Hosken '579), Claims 2, 3, 28 to 31, 34 to 38, 40, 41, 60, 61, 86 to 90 and 93 to 97 are rejected under 35 U.S.C. § 103(a) over Hosken '579 and U.S. Patent No. 6,430,539 (Lazarus), and Claims 15, 16, 46, 47, 73 and 74 under 35 U.S.C. § 103(a) over Hosken and U.S. Patent No. 6,526,411 (Ward). Reconsideration and withdrawal of the rejections are respectfully requested for at least the following reasons.

The Applicant's remarks concerning the propriety of Hosken '579 as prior art remain applicable. The record is clear that Hosken '579 was filed after the effective filing date of the present application, and that Hosken '579 can only be prior art if it is shown to be entitled to the benefit of the filing date of U.S. Provisional Application No. 60/144,377 (the '377 Hosken provisional). Hosken '579, and the portions of Hosken '579 relied upon to reject the claims of the present application, can only be entitled to the filing date of the '377 Hosken provisional if the '377 Hosken provisional provides § 112, first paragraph support, i.e., support which satisfies the written description, enablement and best mode requirements, for the portions of Hosken '579 relied upon to reject the claims of the present application. Without such a showing, Hosken '579 cannot be prior art to the claims of the present application.

The Examiner concedes that Hosken discloses more than the '377 Hosken provisional application, and further concedes that the '377 Hosken provisional could not formally be used against the claims of the present application. The Applicant submits that the portions of Hosken '579 that admittedly disclose more than the '377 Hosken provisional cannot claim the benefit of the '377 Hosken provisional, and these portions of Hosken '579 cannot be relied upon to reject the claims of the present invention. The concessions made in the Office Action provide even more justification for Applicant's repeated requests that the Examiner confirm that those portions

of Hosken '579 that the Examiner is using to reject the claims of the present application are supported by an enabling description provided by the '377 Hosken provisional, or alternatively withdraw the §§ 102(e) and 103(a) rejections of the claims.

It is clear from MPEP § 2136.03(III) that the burden lies with the Examiner to provide a showing. In the rejection of Claim 1, for example, the Office Action fails to provide any indication as to what portions of the '377 Hosken provisional support col. 4, lines 44 to 68 and/or col. 12, line 35 to col. 13, line 6 of Hosken '579. The Examiner is respectfully requested to provide support for each portion of Hosken '579 that she is applying to reject the claims of the present application, should the Examiner maintain her current rejection.

In the interest of advancing prosecution, although not intended to be an exhaustive and complete listing, the Applicant provides some additional examples taken from the cited portions of Hosken '579 which the Applicant believes lack an enabling description in the '377 Hosken provisional.

At col. 5, lines 20-62, Hosken '579 refers to "individual and collaborative profiles", while the '377 Hosken provisional only refers to a user profile. This portion of Hosken '579 describes that a user's navigation of a presented recommendation set and the user actions in reviewing and considering individual and groups of media content items are utilized in the progressive modification and refinement of the profiles data, however, the '377 Hosken provisional fails to provide a description, enabling or otherwise, of progressively modifying and refining profiles data based on a user's navigation of a presented recommendation set. Furthermore, the '377 Hosken provisional fails to provide a description, enabling or otherwise, as to how a user action is even reflected in a user profile. The '377 Hosken provisional fails to provide a description, enabling or otherwise, as to how a content item rating is defined other than by a user expressly providing the rating. The '377 Hosken provisional lacks any description as to how implicit behavior, a user action, or information other than a user's express rating input, is used to generate a rating for a content item. In addition, nothing in the '377 Hosken provisional provides a description, enabling or otherwise, of how implicit behavior or a user action identifies the content item. The discussion found at col. 5, lines 20 to 62 of Hosken '579 also refers to deriving "other information" from "periods of user non-action. In this same discussion, Hosken '579 suggests that "the time spent by a user" to review information or listen to a music clip

provides implicit information regarding the interest level of the user. Nothing can be found in the '377 Hosken provisional that provides enabling support for deriving information from periods of user non-action, determining an amount of time spent by a user in a non-action, let alone a determined amount of time spent by a user providing implicit information.

With regard to col. 12, line 38 to col. 13, line 30 of Hosken '579 cited in the Office Action. The portion of Hosken '579 commencing at col. 12, line 38 describes a referral system that operates as a graph traversal system over a data set constructed from a user profile and the product of a final weighting filter. The referral system traverses the binary relationships between characterizing attributes to compute a final rating and confidence based on a weighted rating and confidence associated with each step traversed, and uses a final weighting filter to apply an empirical normalization to weighting values. The '377 Hosken provisional lacks any enabling description of the referral system described in Hosken '579, including lacking an enabling description of traversing a graph, assigning weighted ratings and confidence levels to steps in a traversal, computing a final rating and confidence level for a traversal, and/or using a final weighting filter to apply an empirical normalization to weighting values. These are just some, but in no way all, of the examples of the lack of enabling support for the cited portion of Hosken's '579.

With regard to Claims 12 and 13 of the present application, the Office Action cites col. 4, lines 11 to 55 and col. 5, lines 20 to 62 of Hosken '579. In addition to the discussion provided above, col. 4, lines 11 to 55, Hosken '579 mentions the referral system that derives implicit profiling data, without any description of how the referral system derives implicit profiling data. The '377 Hosken provisional also lacks any enabling disclosure as to how implicit profiling data is derived.

Based at least on the above and the concessions made in the Office Action, the Applicant respectfully submits that there are significant portions of Hosken '579 relied upon by the Examiner to reject the claims of the present application which are not supported or enabled by the disclosure of the '377 Hosken provisional. Since the grounds for rejection of the pending claims relies on portions of Hosken '579 for which there is no enabling disclosure provided by the '377 Hosken provisional, a rejection so based is improper and should be withdrawn.

Applicant therefore respectfully requests withdrawal of the §§ 102(e) and 103(a) rejections of the pending claims, in accordance with MPEP § 2136.03(III) and 35 U.S.C. § 112, first paragraph.

Furthermore and while Hosken '579, at col. 13, line 34 to col. 16, line 54, appears to reproduce a portion from page 7, line to page 12, line 28 of the '377 Hosken provisional, the portion fails to teach, suggest or disclose each and every element of the claims. Therefore, it cannot form the basis of a proper § 102 rejection or a § 103(a) rejection.

Turning to the language of Claim 1, a method is recited which includes accepting item selections detected from a plurality of users, generating a log for each user, each log containing identifiers corresponding to detected user item selections, scoring each of the user logs, the scoring for each user log being responsive to a frequency of occurrence of the at least one query item identifier in the user log, a frequency of occurrence of the at least one query item identifier in all of the user logs and a query weight for the at least one query item identifier in the query, so as to generate a user log score for each user log based exclusively on detected user item selections and the at least one query item, and determining at least one result item responsive to the scoring of the user logs, so as to discover at least one relationship based exclusively on detected user item selections and the at least one query item.

The '377 Hosken provisional identifies a user profile consisting of a music item and a user's explicit rating for the music item. While the '377 Hosken provisional mentions that "the system may derive implicit ratings of music items" at p. 8, line 19, it is notably silent, and lacks any disclosure, enabling or otherwise, as to how an implicit rating, is derived from implicit observation of users' action. The '377 provisional fails to provide any disclosure that would enable one of ordinary skill to use observed behavior, or to derive ratings information from observed behavior. A review of the '377 Hosken provisional fails to identify any discussion of implicit behavior beyond a cursory mention that information in the user profile table can be provided through implicit observation of the system based on users' actions. The '377 Hosken provisional requires that an item have a rating to make a recommendation, and the '377 Hosken provisional has no disclosure, enabling or otherwise, as to how user actions could be used to generate or otherwise provide a rating other than an explicit rating. In fact, the only description in which a rating is provided in the '377 Hosken provisional is in the case that the user provides an explicit rating. There is nothing in the portions of the '377 Hosken provisional that describes

how a user profile rating could even be generated from implicit user behavior. According to the '377 Hosken provision, a correlation is determined between the user and a user cluster. While the example refers to a correlation algorithm that performs this correlation, there is no description as to how this algorithm functions to determine a correlation between a user and a user cluster. The '377 Hosken provisional further lacks any disclosure, enabling or otherwise, as to how a correlation is determined between two user profiles. Should the Examiner maintain her position in this regard, the Application respectfully requests the Examiner to identify the specific portion of the '377 Hosken provisional that the Examiner believes describes, and provides an explanation of, how a rating is generated from users' actions in the '377 Hosken provisional, and to identify the specific portion of the '377 Hosken provisional that specifically describes how its' correlation algorithm functions to determine a correlation between two user profiles.

In addition to the lack of description provided by the '377 Hosken provisional of its own functionality, nothing in the '377 Hosken provisional can be said to correspond to scoring each user log, the scoring for each user log being responsive to a frequency of occurrence of the at least one query item identifier in the user log, a frequency of occurrence of the at least one query item identifier in all of the user logs and a query weight for the at least one query item identifier in the query, the user log score that is generated being based exclusively on detected user item selections and the at least one query item. According to the '377 Hosken provisional, a correlation is determined between two user profiles. As discussed above, the '377 Hosken provisional is notably silent as to the manner in which it determines a correlation. Hosken merely mentions that a correlation is determined. Hosken fails to even mention what information is used to determine the correlation, and certainly fails to disclose or suggest determining that its correlation is responsive to a frequency of occurrence of a query item in a user log and/or scoring a user log responsive to a frequency of occurrence of a query item in all of the user logs, a frequency of occurrence of a query item in the user log that is being scored, and a query weight. Even assuming *arguendo* that Hosken's user profile corresponds to the claimed user log (an assumption that is in no way conceded and one that is not even understood to be supported by the facts), Hosken's correlation is between two user profiles only, and is not responsive to all of the user profiles. At page 11, line 4 to page 12, line 6 of the '377 Hosken provisional, a correlation weight is determined for an item that is found in the cluster user's

profile but not found in the user's profile. The correlation weight for an item in the cluster user's profile is calculated by multiplying the item's rating and the correlation. In contrast to the claimed query weight that is used to score a user log, according to the '377 Hosken provisional, Hosken's correlation weight is used to generate a weighted rating for an item in a user profile, i.e., Hosken multiplies the weight, which is Hosken's correlation, and an item's rating to generate a weighted rating for the item. Using a weight to calculate a weighted rating for an item in a user profile is clearly not the same as using a weight to score a user log. Nothing in the '377 Hosken provisional teaches, suggests or discloses scoring a user log responsive to a frequency of occurrence of the at least one query item identifier in the user log, a frequency of occurrence of the at least one query item identifier in all of the user logs and a query weight for the at least one query item identifier in the query, the user log score that is generated being based exclusively on detected user item selections and the at least one query item.

For at least the foregoing reasons, Hosken fails to teach, suggest or disclose multiple elements of Claims, 1, 39 and 59 (and the claims that depend from Claims 1, 39 and 59).

Turning to independent Claims 34 and 93, among the features recited therein, is a feature of generating, based on a determined log likelihood ratio, a representation of a relationship between a first item and a second item based on implicit user behavior. In view of the above discussion, it should be clear that any rejection of the claims based on Hosken '579 is improper, and should be withdrawn. The § 103(a) rejection of Claims 34 and 93, and the claims that depend from these claims, based on Hosken '579 and Lazarus should be withdrawn.

For at least the foregoing reasons and the concessions made in the Office Action, the rejection based on Hosken '579 is improper, since significant portions of Hosken '579 relied upon to form the rejection lack enabling descriptive support in the '377 Hosken provisional. Furthermore, the remaining portions of Hosken '579 relied upon in the Office Action are missing multiple elements of each of the pending claims. Hosken '579 cannot therefore form the basis for a § 102 rejection, and cannot form the basis of a § 103(a) rejection. Withdrawal of the rejections based on Hosken is therefore respectfully requested. Furthermore and since both Lazarus and Ward fail to disclose at least the same claim elements as are missing in Hosken '579, the combinations of Hosken '579 with Lazarus cannot form the basis for a §103(a)

rejection of the claims. Furthermore, there has been no showing that Ward is even prior art to the claims of the present application.

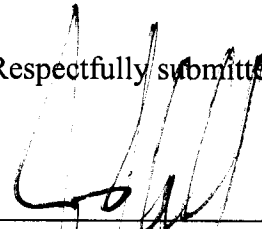
In view of the foregoing, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Should matters remain which the Examiner believes could be resolved in a telephone interview, the Examiner is requested to telephone the Applicant's undersigned attorney. Alternatively, since it is believed that the claims of the present application are in condition for allowance, the Examiner is respectfully requested to issue a Notice of Allowance at the Examiner's earliest convenience.

The applicant's attorney may be reached by telephone at 212-801-6729. All correspondence should continue to be directed to the address given below, which is the address associated with Customer Number 76058.

The Commissioner is hereby authorized to charge any required fee in connection with the submission of this paper, any additional fees which may be required, now or in the future, or credit any overpayment to Account No. 50-1561. Please ensure that the Attorney Docket Number is referenced when charging any payments or credits for this case.

Respectfully submitted,

  
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